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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/787,136	02/27/2004	Hay Yeong Yang	1594.1376	4650
21171	7590	05/31/2005	EXAMINER	
STAAS & HALSEY LLP SUITE 700 1201 NEW YORK AVENUE, N.W. WASHINGTON, DC 20005			HOANG, TU BA	
			ART UNIT	PAPER NUMBER
			3742	

DATE MAILED: 05/31/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/787,136	Applicant(s) YANG ET AL.	
	Examiner Tu Ba Hoang	Art Unit 3742	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6, 8, 10-16, 19-22 and 25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>02/27/04</u> . | 6) <input type="checkbox"/> Other: ____.  |

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***Priority***

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

***Drawings***

The drawings were received on 02/27/04. These drawings are approved by the Examiner.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-10 and 12-26 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 1 and 8, the phrase "values of *current output from the heating units*" (at line 5) renders the claim indefinite because it is unclear how such "heating units" can output such "current" or "values of current" but not just heat or thermal energy since such "heating" units are clearly for outputting or providing "heat" and have clearly "heating" operational function but not detecting function. Does applicant mean "values of current provided to the heating units through the electrodes" instead? Clarification is needed. It is suggested that the phrase "output" to be deleted or replace "output from" with "supplied to".

Similarly, in claims 7 and 10, the term "output" recited at line 2 should be deleted to avoid confusion.

Claims 12-14 are directed to "The electric cooking apparatus" which are dependent from a "Method" claim 10, in which such dependencies renders these claims indefinite.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 5-6, 8, 10-11, 19-22, and 24 are rejected under 35 U.S.C. 102(b) as being anticipated by Brown et al (US 6,157,008). Brown et al shows all features of the claimed invention including an electric cooking appliance comprising a plurality of heating units (8,9,20-23), each having a heating element and electrodes or power supply lines (i.e., lines 82 or 88) connected to the heating element, a switching unit (i.e., switches 100,101,102,103) for switching power applied to the power supply lines of the heating units, a current detecting unit (i.e., current sensors 84,89, also at column 4, lines 44-45, i.e., additional sensor could be provided in connection with the surface elements 20-23) to detect values of current from the heating units (i.e., monitors the required current based on established settings by the consumer as set forth at column

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3, lines 50-52), and a control unit 80 shown in Figure 2 to separately operate a predetermined number of heating units, which are determined according to the values of current detected from the current detecting unit after operating the heating units and to calculate rates of change of current in the heating units according to the values of current detected from the current detecting unit 84,89 (i.e., selectively activating and deactivating the heating units respectively as set forth at column 2, lines 51-58 and column 4, lines 34-45, i.e., the control unit 80 receives signals related to the power consumption operating parameters such as sensed variations in voltage or resistance levels), and a microprocessor or control panel 28 (which includes a plurality of knobs 36-39 and number pad 46 having associated button 48 for inputted data by the consumer) to operate the predetermined number of heating units determined according to the calculated rates of change of current (column 4, lines 1-11 and also see abstract).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 2-4, 12-16, and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brown et al as applied to claims 1, 5-6, 8, 10-11, 19-22, and 24 above in view of Schultheis et al (US 6,050,176). Brown et al discloses all features of the claimed invention as previously set forth above and further includes a support frame or range top 18 located around the cooking plate and the heating units for supporting the control unit as well as other structures related to the cooking plate. Brown et al fails to show a thermally conductive cooking plate made of a ceramic glass material, wherein the heating units are printed in independent cells under the cooking plate which allows a

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cooking container to be located thereon, a heat-insulating material located under the heating units, the heating units are printed under a total area of the cooking plate to provide heat to the lower part of the cooking plate and are located under the cooking plate at predetermined intervals, a support plate located under the heat-insulating material, and a support frame is located around the support plate to support the control unit which operates the heating units. It is noted that the uses of ceramic glass cooking plates or tops, printed heating units in independent cells or patterns or elements under the cooking plate, a heat-insulating material or thermal insulation located under the heating units, a support plate, and a support frame in cook top appliances are old and well known, as evidence, Schultheis et al discloses cook top appliance having a thermally conductive cooking top (2) with cooking plate (3) made of a ceramic glass material (column 4, lines 44-45), wherein a plurality of independent heating cells or heating units (4) are printed in independent cells under the cooking plate (3) to allow a cooking container to be located thereon (column 5, line 5, i.e., printed on as shown in Figures 2-3 and 5), a heat-insulating material (14) located under the printed heating units or cell 4 as shown in Figures 3 and 5, the heating units or cells 4 can also be printed under a total area of the cooking plate (3) to provide heat to the lower part of the cooking plate (3) and are also located under the cooking plate (3) at predetermined intervals (as shown in Figures 1 and 3-5), and a support plate (5) located under the heat-insulating material (14). Both Brown et al and Schultheis et al inherently show there should be a support frame for supporting electrical and mechanical elements of their electric appliances such as casing 5 or hop 1. It would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize in Brown et al in place of his range top 18, the cook top having a thermally conductive cooking plate made of a ceramic glass material, wherein the heating units are printed in independent cells under the cooking plate which allows a cooking container to be located thereon, a heat-insulating material located under the heating units, the heating units are printed under a total area of the cooking plate to provide heat to the lower part of the cooking plate and are located under the cooking plate at predetermined intervals, a support plate located under the heat-insulating material, and a support frame is located around the support plate to support the control unit which operates the heating units as taught by Schultheis et al in order to avoid damage to the surface and the cover and the undesirable dissipation of heat as well as to prevent liquid or the like from penetrating between the heating elements and the cooking top.

The following is a statement of reasons for the indication of allowable subject matter: the prior art of record does not show or fairly suggest the determined rates of changes of current from the heating units are for determining the presence of the cooking container and thereby to operate a predetermined number of heating units as recited in claims 7 and 9, each of the heating units comprises a sheet-heating element formed by printing a heat-generated paint under the cooking place in the independent cells as recited in claim 17, each of the heating units detects a location and size of the cooking container as recited in claim 23, and the control unit detects the location of the

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cooking container and operates a predetermined number of heating units corresponding to the detected location as recited in claim 26.

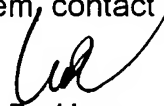
Claims 7, 9, 17-18, 23, and 26 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: Forman (US 4,010,412), Schultheis et al (US 5,352,864), Kallgren (US 5,973,298), Cooper (US 5,616,266), and Provancha et al (US 6,242,722).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tu Ba Hoang whose telephone number is (571) 272-4780. The examiner can normally be reached on Mon-fri from 8:30AM to 6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robin Evans can be reached on (571) 272-4777. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Tu Ba Hoang  
Primary Examiner  
Art Unit 3742

May 25, 2005